What is claimed is:

1. A carburizing method for carrying out carburization in an atmosphere gas containing not more than 30% by volume of carbon monoxide under a pressure of 13 to 4,000 Pa, wherein the carburization is carried out while analyzing the composition of the atmosphere gas and adjusting at least one of temperature, pressure, and composition of the atmosphere gas according to the analysis result.

2. The carburizing method as claimed in claim 1, wherein the composition of said atmosphere gas during carburization is analyzed by measuring an oxygen amount in said atmosphere gas.

3. The carburizing method as claimed in claim 1, wherein the composition of said atmosphere gas during carburization is analyzed by measuring a thermal conductivity of said atmosphere gas.

4. The carburizing method as claimed in claim 1, wherein the composition of said atmosphere gas during carburization is analyzed by measuring a hydrogen amount in said atmosphere gas.

5. A carburizing apparatus for carrying out carburization in an atmosphere gas containing not more than 30% by volume of carbon monoxide under a pressure of 13 to 4,000 Pa, wherein the carburizing apparatus comprises a carburizing chamber for housing an object to be treated;

gas analysis means for analyzing a composition of the atmosphere gas in said carburizing chamber during carburization;

at least one of temperature adjustment means for changing a temperature inside of said carburizing chamber according to an analysis result by said gas analysis means;

pressure adjustment means for changing a pressure inside of said carburizing chamber according to the analysis result by said gas analysis means;

atmosphere gas composition adjustment means for changing the composition of said atmosphere gas inside of said carburizing chamber according to the analysis result by said gas analysis means;

and an information display apparatus for displaying information of the analysis results according to the analysis results of said gas analysis means.

6. The carburizing apparatus as claimed in claim 5, wherein said gas analysis means is an oxygen sensor.

7. The carburizing apparatus as claimed in claim 5, wherein said gas analysis means is an instrument for measuring thermal conductivity of said atmosphere gas.

8. The carburizing apparatus as claimed in claim 5, wherein said gas analysis means is a hydrogen sensor.